

Appln. No. 09/742,033

Amdt. dated November 24, 2003

Response to Final Office Action of May 30, 2003

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. Canceled
2. Canceled
3. (Currently Amended) A compound which comprises an electrochemiluminescent label linked to a coreactant, wherein: ~~said coreactant undergoes oxidation to form a reductant or reduction to form an oxidant, such that said compound emits electrochemiluminescence when exposed to electrochemical energy~~
 - (i) said coreactant can be oxidized to form a reductant or reduced to form an oxidant; and
 - (ii) on exposure of said compound to electrochemical energy sufficient to form said reductant or said oxidant, said reductant or oxidant reacts with said label so as to cause said label to emit electrochemiluminescence.
4. (Currently Amended) A compound which comprises an electrochemiluminescent label including a coordinate complex of a metal, which label is linked to an electrochemiluminescence coreactant, wherein: ~~said coreactant undergoes oxidation to form a reductant or reduction to form an oxidant, such that said compound emits electrochemiluminescence when exposed to electrochemical energy~~
 - (i) said coreactant can be oxidized to form a reductant or reduced to form an oxidant; and

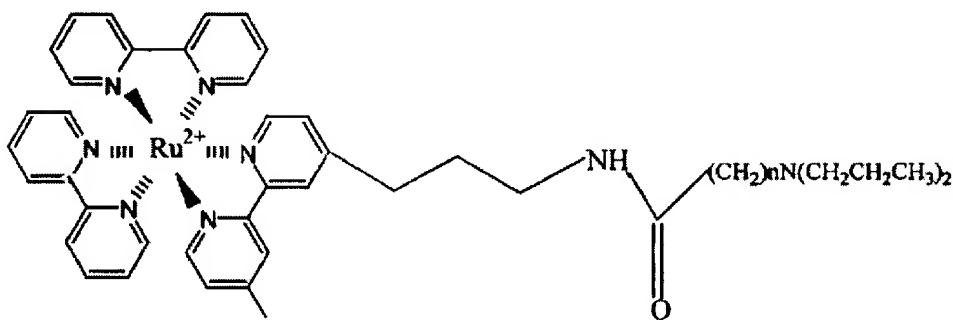
Appln No. 09/742,033

Amdt. dated November 24, 2003

Response to Final Office Action of May 30, 2003

- (ii) on exposure of said compound to electrochemical energy sufficient to form said reductant or said oxidant, said reductant or oxidant reacts with said label so as to cause said label to emit electrochemiluminescence.

5. Canceled
6. Canceled
7. Canceled
8. Canceled
9. (Previously Presented) The compound of claim 3 having the formula:



10. (Previously Presented) The compound of claim 3, further comprising a biomolecule.
11. (Previously Presented) The compound of claim 3, wherein the coreactant is not an analyte of interest.
12. (Currently Amended) The compound of claim 3, wherein said electrochemiluminescent label is linked to said coreactant by a linkage which comprises one or more linking groups for attachment of biomolecules.

Appln. No. 09/742,033

Amdt. dated November 24, 2003

Response to Final Office Action of May 30, 2003

13. (Previously Presented) The compound of claim 3 or 4, wherein said coreactant is an amine.

14. (Currently Amended) The compound of claim 3 or 4, wherein said coreactant ~~is a~~ comprises an aliphatic tertiary amine moiety.

15. (Previously Presented) The compound of claim 3 or 4, wherein said coreactant comprises a dipropyl amine moiety.

16. (Previously Presented) The compound of claim 3 or 4, wherein said coreactant is an N,N-dipropyl amino acid.

17. (Previously Presented) The compound of claim 3 or 4, wherein said coreactant is NADH.

18. (Previously Presented) The compound of claim 3 or 4, wherein said coreactant is the hydrolyzed form of a β -lactam antibiotic having a hydrolyzed β -lactam bond.

19. (Previously Presented) The compound of claim 3 or 4, wherein said electrochemiluminescent label comprises ruthenium, osmium or rhenium.

20. (Previously Presented) The compound of claim 3 or 4, wherein said electrochemiluminescent label and said coreactant are linked by an amide bond.

21. Canceled

22. Canceled

23. Canceled

24. Canceled

25. Canceled

Appln. No. 09/742,033

Amdt. dated November 24, 2003

Response to Final Office Action of May 30, 2003

26. (Previously Presented) The compound of claim 4, wherein said label comprises a single metal ion.

27. (Previously Presented) The compound of claim 3 or 4, wherein said ECL label and said coreactant are directly linked via a functional group of said ECL label or said coreactant.

28. (Previously Presented) The compound of claim 3 or 4, wherein said ECL label and said coreactant are linked via linker comprising a polymer, a polypeptide chain, a polynucleic acid, a polysaccharide, an oligo-ethylene glycol group, or a combination thereof.

29. (Previously Presented) The compound of claim 3, wherein said ECL label and said coreactant are directly linked via a linkage comprising one or more linking groups selected from the group consisting of NHS-esters, carboxylic acids, amines, thiols, disulfides, maleimides, hydroxides and combinations thereof.

30. (Previously Presented) The compound of claim 3, wherein said compound is linked to a biomolecule.

31. (Previously Presented) The compound of claim 3, wherein said compound consists essentially of said ECL label and said coreactant.

32. (Previously Presented) The compound of claim 3, wherein said ECL label is oxidized by exposure to electrochemical energy and said coreactant is a reductant or a reductant precursor.

33. (Previously Presented) The compound of claim 3, wherein said ECL label is reduced by exposure to electrochemical energy and said coreactant is an oxidant or oxidant precursor.

Appln. No. 09/742,033

Amdt. dated November 24, 2003

Response to Final Office Action of May 30, 2003

34. (Previously Presented) The compound of claim 3, wherein said ECL label is different from said ECL coreactant.

35. (New) The compound of claim 19, wherein said coreactant is an amine.

36. (New) The compound of claim 19, wherein said coreactant comprises an aliphatic tertiary amine moiety.

37. (New) The compound of claim 19, wherein said coreactant comprises a dipropyl amine moiety.

38. (New) The compound of claim 19, wherein said coreactant is an N,N-dipropyl amino acid.

39. (New) The compound of claim 19, wherein said coreactant is NADH.

40. (New) The compound of claim 19, wherein said coreactant is the hydrolyzed form of a β -lactam antibiotic having a hydrolyzed β -lactam bond.